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## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

JAN 2 4 2005

OFFICE OF AIR AND RADIATION

Mr. Marty Lassen Manager, Commercial Development and Marketing Johnson Matthey 380 Lapp Road Malvern, PA 19355

Dear Mr. Lassen:

The U.S. Environmental Protection Agency (EPA) previously verified Johnson Matthey's CEM<sup>TM</sup> Catalytic Exhaust Muffler/ DCC<sup>TM</sup> Diesel Catalytic Converter for 1998 through 2003 model year engines. EPA has now reviewed your request for an extension of the verification to include older 1991 through 1997 model year engines. Based on our evaluation of your verification application, test data and additional information provided, EPA hereby verifies that this technology reduces emissions of certain criteria pollutants by the percentages as before and extends the verification to include 1991 through 1997 model year engines.

This technology is approved for use on the following engines and/or vehicles provided all of the required operating criteria are met as described below:

All highway, heavy-heavy, medium-heavy, light-heavy duty, non-urban bus, 4-cycle, non-EGR, turbocharged or naturally aspirated diesel engines, originally manufactured from **1991 through 2003 model years** and which were originally produced without diesel oxidation catalysts or diesel particulate filters.

Technology	Fuel (sulfur content)	Particulate Matter (PM) %	Carbon Monoxide (CO) %	Hydrocarbons (HC) %	Oxides of Nitrogen (NOx) %
CEM <sup>™</sup> Catalytic Exhaust Muffler and/or DCC <sup>™</sup> Catalytic Converter	≤ 500 ppm	20	40	50	0

The following operating criteria must be met in order for appropriately retrofitted engines to achieve the aforementioned emissions reductions:

- 1. The engine must be operated with a fuel that contains a sulfur content of no more than 500 ppm.
- 2. The engine exhaust temperature must achieve at least 150 degrees C during its duty cycle.
- 3. The engine should be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.

Johnson Matthey has indicated there is no fuel economy penalty with the use of this technology.

Information on Johnson Matthey's CEM<sup>TM</sup> Catalytic Exhaust Muffler and/or DCC<sup>TM</sup> Catalytic Converter, percent reduction, applicable engines, and in-use testing program will be posted on the EPA Voluntary Diesel Retrofit Program website (http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm). As you know, Johnson Matthey will be responsible for completing the required in-use testing program and for submitting all in-use testing data to EPA.

Thank you for participating in EPA's Voluntary Diesel Retrofit Program. If you have any questions or comments, please contact Arman Tanman, of my staff, at (202)343-9326.

Sincerely,

Merrylin Zaw-Mon, Director

Certification & Compliance Division

Office of Transportation and Air Quality